Olefin double bond energy storage battery

What is a dual ion battery (Dib)?
(Elsevier B.V.) Dual ion batteries (DIBs) exhibit broad application prospects in the field of elec. energy storage (EES) devices with excellent properties, such as high voltage, high energy d., and low cost.

Can dual-ion batteries be used as active electrode materials?
(Science Press) Dual-ion batteries (DIBs) have attracted immense interest as a new generation of energy storage device due to their low cost,environmental friendliness and high working voltage. However,developing DIBs using org. compds. as active electrode materials is in its infancy. Herein,we first report a bipolar and self-polymd.

Are dual-ion batteries good for energy storage?
Low-cost and environment-friendly dual-ion batteries (DIBs) with fast-charging characteristics facilitate the development of high-power energy storage devices. However,the incompatibility between the cathode and electrolyte at high voltage results in low Coulombic efficiency (CE) and short lifespan.

Is fluorinated polyimide a high-voltage binder for lithium-ion batteries?
H. Q. Pham,G. Kim,H. M. Jung and S.-W. Song,Fluorinated polyimide as a novel high-voltage binderfor high-capacity cathode of lithium-ion batteries,Adv. Funct. Mater.,2018,28,1704690 CrossRef.

Is tin disulfide a promising electrode material for sodium ion batteries?
Nano Energy (2021),79 (),105458 CODEN: NEANCA; ISSN: 2211-2855. (Elsevier Ltd.) Tin disulfide is considered as a promising electrode material for sodium-ion batteriesbecause of its two-dimensional layered structural characteristics allowing the intercalation of Na ions.

Do bioinspired binders control ion migration in high sulfur loading lithium-sulfur batteries?
He,H. Xing,X. Zhan,F. Chen and Q. Zhang,Bioinspired binders actively controlling ion migrationand accommodating volume change in high sulfur loading lithium-sulfur batteries,Adv. Energy Mater.,2019,9,1902938 CrossRef CAS.

Those atoms are linked by a double bond, which - along with the hydrogen and carbon content - makes them an unsaturated hydrocarbon. Also known as alkene, olefins can vary in the number of double bonds per molecule, making ...

Lithium-ion batteries (LIBs) as portable power sources currently take a lion"s share and are expected to seize a vital role in distributed energy storage stations (1-5). Meanwhile, there is increasing interest in developing batteries based on ...

The search for novel energy storage technologies has been sparked by the energy crisis, the greenhouse effect,

and air pollution. [1, 2] Aqueous rechargeable batteries represent an up-and-coming option for large-scale energy storage owing to their superior safety, economical cost, and environmental friendliness.[3, 4] Aqueous rechargeable zinc batteries (AZBs) have ...

An olefin and energy storage technology, applied in the direction of active material electrodes, lead-acid battery electrodes, electrical components, etc., can solve problems such as uneven ...

In 1924, Julius Bredt condensed the Bredt"s rule, 13 which states that bridged ring systems, like camphane and pinane, cannot have a double bond at the bridgehead position. Of course, Bredt himself, at the late stage of his career, realized that his rule will be violated if the ring system is bigger. 14 Thus, the so called anti-Bredt olefins can be synthesized and isolated ...

This chapter discusses our research into the functionalization of polyolefins (PE, PP etc.) that contain polar groups (such as OH and NH 2) in the side chains and chain end, as well as polyolefin graft and block copolymers containing both a polyolefin block and functional polymer blocks (acrylic and methacrylate polymers) the late 1980s, our research on the ...

Developing a solid polymer electrolyte (SPE) combining superior interface stability with high ionic conductivity is still a challenge in the energy storage field. Herein, a series of ...

An olefin and energy storage technology, applied in the direction of active material electrodes, lead-acid battery electrodes, electrical components, etc., can solve problems such as uneven plate weight, increased battery internal resistance, and damage to the physical structure of positive active materials and negative active materials., to achieve the effects of reducing the ...

Portable energy storage devices such as lithium-ion battery (LIB) demonstrate promising applications in almost all fields of people"s daily life [1], [2].However, the organic liquid electrolyte normally employed for LIB takes also with safety challenges like leakage, flammable organic solvent and even explosion of the battery [3], [4] is well known that porous polyolefin ...

There is provided a low-cost alkaline storage battery separator capable of implementing stable fiber spinning and excellent ammonia trapping function so as to control self-discharge. Spinning fiber using resin including 1.0 mass % or greater of low crystalline polyolefin, crystalline polyolefin and maleic anhydride-modified polyolefin corresponding to a maleic anhydride component ...

Environmental assessment of olefin double bond batteries Does lithium-oxygen Lio 2 battery reduce environmental impact? Life cycle assessment (LCA) of lithium-oxygen Li-O 2 battery ...

Black phosphorus (BP) is a promising electrode material with high energy density for lithium-ion batteries. However, volumetric expansion of BP upon lithiation leads to rapid capacity fading of the electrode. Herein,

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BP composite ...

Li-metal coated with Olefin is prepared via a simple in-situ method. Li-S batteries using protected lithium metal anode are investigated. The coating can significantly improve the ...

In pursuit of this objective, olefin- and rubber-based polymers have been investigated as promising alternatives for binder materials in high-energy Ni-rich ...

However, in the pursuit of high-specific-energy batteries featuring high mass loading, high voltage, and large volume changes, the PVDF binder is unable to satisfy the versatile electrode ...

The photoisomerization of double bonds by E n T catalysis, initially proposed for styrenes but applicable to other functional groups such as Ar, Bpin, or C-C double bonds, typically proceeds via a Dexter mechanism [17] in which a photocatalyst in its triplet, photoexcited state populates the triplet state of the olefin (Figure 1 a). This process is characterized by the simultaneous ...

The latter new peak with a higher bonding energy can be assigned to the N atoms in amide linkages (-C(=O)N-) at the interface formed by the reaction of the carboxylic acid on CNT with the amine groups on DAAQ [36], indicating the change of the bonding mode of N atoms in c-CNT@COF. These results strongly support that the COF is chemically ...

The broad peaks located at 2994, 2927 and 2844 cm -1 of as-prepared productions are associated with the stretching vibrations of C-H bonds [16]. The peak at 1602 cm -1 is attributed to the presence of terminal double bond, due to ...

Phase change materials (PCMs) have been extensively characterized as promising energy materials for thermal energy storage and thermal management to a...

Among the monovalent (Li +, Na +, and K +) and multivalent metal-ion (Ca 2+, Mg 2+, Zn 2+ and Al 3+) batteries, rechargeable aqueous zinc-ion batteries (ZIBs) represent the most promising alternative for large-scale ...

Developing a facile strategy for the construction of vinylene-linked fully p-conjugated covalent organic frameworks (COFs) remains a huge challenge. Here, a versatile condition of Knoevenagel ...

The elastically resilient, chemically recyclable and highly conductive solid polymer electrolyte enables 4.3 V-class and room-temperature Li metal batteries with stable cyclability, ...

Herein, we reported our research story for the development of a novel [4 + 2] annulation transformation of benzosilacyclobutenes with activated alkynes based on controllable Si-C(sp 3) bond activation with the aid of

new palladium catalyst, in which an unexpected process with tandem olefin migration and hydrolysis reaction occurred smoothly to give a series of ...

Human society is at the dawn of the energy transition from fossil fuel to renewable electricity. Lithium-ion batteries (LIBs) as portable power sources currently take a lion"s share and are expected to seize a vital role in distributed energy storage ...

The world is rapidly adopting renewable energy alternatives at a remarkable rate to address the ever-increasing environmental crisis of CO2 emissions....

The resonance peaks at d = 6.13 and 5.60 ppm (a and b, respectively) are associated with the protons from the olefin double bond. A sharp proton peak observed at 1.8 ppm and the overlapping peaks observed at d = 3.6-4.2 ppm is assigned to methyl and methylene of HGMA, separately.

Rechargeable aqueous zinc-ion batteries (ZIBs) are considered ideal candidates for next-generation energy storage systems because of their high safety and cost-effectiveness. However, the widespread adoption depends on the discovery of superior cathode materials. Layered electrode materials, equipped with two-dimensional (2D) ion diffusion ...

US20160079580A1 US14/786,189 US201414786189A US2016079580A1 US 20160079580 A1 US20160079580 A1 US 20160079580A1 US 201414786189 A US201414786189 A US 201414786189A US 2016079580 A1 US2016079580 A1 US 2016079580A1 Authority US United States Prior art keywords olefin resin film stretching microporous film aging Prior art date 2013 ...

In parallel, Crag Williams" team at the University of Queensland, Australia, has developed a one-pot synthetic approach to access hyperstable alkenes - cage-like structures predicted to be unreactive due to minimal strain on their double ...

The carbon-carbon double bond in olefins serves as a precursor to a rich array of transformations and is a cornerstone in the materials, pharmaceutical, agrochemical arenas, and food industry (1, 2) s construction ...

Carbon-carbon double bond (CCDB) isomerization is a method for synthesizing new organic compounds from olefins and their derivatives, which was based on C=C migration along carbon chain and cis/trans transform, and ...

The key feature of the insertion mechanism is that: (i) the active metal center bearing the growing polymer chain must have a coordination site available to insert the incoming monomer, and (ii) the insertion occurs via chain migration to the closest carbon of the olefin double bond, which undergoes cis opening with formation of a new metal- ...

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